

# PH.D. SUPERVISION: DOCTORAL STUDENTS PERCEPTIONS, EXPECTATIONS AND NEEDS

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## Abstract

This paper aims to understand the perceptions, expectations, and needs of Ph.D. students regarding the guidance received along the third cycle of higher education (doctoral degree). This goal is framed by the growth of challenges faced by higher education institutions, such as, the increasing number of doctoral programs and its demand. This has led to global competition, based also on the number of doctoral graduates and relevant research developed and published. In this context, it is crucial to understand how the supervision process might play a role in the thesis success, especially from the doctoral students' and doctoral recent graduates' point of view. The inspiration and starting point of this research, also used as a theoretical framework to the professional work of doctoral supervision, includes five interrelated facets, in a holistic perspective, that can be applied from the individual to the group, and in different types of disciplines and institutions. These five facets include the learning alliance, habits of mind, scholarly expertise, technê, and contextual expertise; and structured the approach of questionnaires applied to graduated doctorates or to doctoral students with at least two years of thesis work. Based on the analysis of responses of students/doctorates within different fields of research (health sciences, natural sciences and social sciences & arts), the results show the areas that students value most and recognize as important in doctoral guidance, namely learning alliance and habits of mind, as well as the existing gaps or less developed facets. Depending on the differentiated practice, that reflects several approaches and styles of supervision, it's also possible to understand if supervision guidance impacted the research path and its completion. Recommendations are also presented so that doctoral supervision can be optimized, to develop convergent strategies between supervisors and students.

Keywords: Doctoral supervision; doctoral students; PhD.

## 1 INTRODUCTION

Doctoral Education has been gaining relevance as higher education has been spreading worldwide and showing research branches in the interests that cover the area. It is important to know not only foundational and extensive studies [1-3] to expand and update knowledge about the area of supervision in the 3<sup>rd</sup> cycle of higher education, but also to understand the current challenges of doctoral supervision, with empirical research.

Hockey [4], in a literature review related to the case of Social Sciences, focused on the most pertinent issues: the learning process in graduate school, personal development, social factors, collegiality, and students' problems. It also included the supervisory relationship between supervisor(s) and student and the process of selecting students to pursue research. Bastalich [3] addressed the "supervision problem" of PhD, analysing 52 studies published in the last 20 years in the United Kingdom, Australia, Sweden, and the Netherlands. The author identified four factors, which are based precisely on the human relationships: between doctoral student and advisor (the supervisory relationship); between academics (academic socialisation and pedagogical research); between decision-makers and academics (subjectivity and transition experiences); and finally, between decision-makers and government (regulation and policies). The conclusions pointed to a greater dependence on the social and disciplinary context more than on the individual skills or abilities of the researchers, for a good outcome of the doctoral programs. Likewise, the study developed by Entwistle et al. [5] further highlighted the

complexity of interactions between students and teachers. Additionally, in an extensive review [2] covering 995 articles published between 1971 and 2012, six central themes related to the management and training of doctoral students were listed, including: teaching, design of doctoral programs, writing and research, employment, and career, student-supervisor relationship, and doctoral student experience. Although the area continues to consider these same subjects, the importance gained by behavioural studies is significant, as well as the emergence of experiences and practices of online training or sociological issues. In terms of interests in academic publication, there is a shift towards the student and his/her well-being, especially in the development of relational and behavioural skills, while previously the emphasis was on aspects related to the construction of the doctoral specialization field, with particular focus on curricular issues and training provision [6].

Studies around doctorates, particularly the supervision of students in the 3<sup>rd</sup> cycle are not new, but in the last decades it gained a new vitality, allowing supervisors to position themselves as agents of a process under construction. Therefore, it is important to follow specific investigations regarding supervision practices. Indeed, there is consensus that it is a complex teaching task, requiring a substantial commitment of time and energy by both supervisor and student. Regardless that there is no formula for the supervisor-student relationship, it is known *"it is dependent upon the characteristics of the persons involved, disciplinary differences in the ways knowledge is advanced, and the different learning tasks facing students due to the demands of their field"* [7].

Still, within the scope of supervision, some more specific themes have emerged, particularly from the foundational study of Pearson and Brew [8] that deepened the knowledge about research and supervisory conceptions and practices, as well as in the studies of Lee [9], Kiley and Mullins [10]. However, to find explanatory nexus for doctoral supervision, Halse and Malfroy [11] started with an extensive analysis of orientation styles, through interviews about the main characteristics, and presented a holistic view that can be applied from the individual to the social, in different disciplines and institutions. This was, indeed, the inspiration and starting point of this research, also used as a theoretical framework to the professional work of doctoral supervision. The results show five interrelated facets that are essential to train, manage and improve supervision/guidance: learning alliance; habits of mind; scholarly expertise; technê; and contextual expertise. These dimensions, which will be used in this work for empirical observation, have already been addressed in part in previous studies.

The learning alliance dimension has been the subject of some research, and a model for interpersonal supervisor behaviour, based on doctoral students' perceptions of their relationship with their supervisor [12]. It appears that students engaged in supervisor selection, whose topics are matched with supervisor's expertise, and who develop good interpersonal working relationships with supervisors are more likely to make good progress and be satisfied [13].

As for habits of mind, it is also suggested that a student's reliance on her/his supervisor for guidance and motivation on work organisation and problem-solving, research preparation, and communication exerts a significant effect on the relationship between style and quality of research supervision [14]. On the other hand, students whose supervisors were more analytic also achieved significantly higher grades for their dissertations [15].

An equally important dimension is related to scholarly expertise. Herein, supervisors are expected to guide students through the dissertation process, introducing them to discipline-specific discourse practices. Paré [16] explains that each discipline and sub-discipline sets its research gauze on certain phenomena, uses community-approved methods to collect relevant data, draws on different kinds of evidence, and finally crafts particular types of argument.

Technical expertise or technê is another crucial component in supervision. In fact, for student satisfaction and perceived supervisor contribution to learning it is important for students not to take a submissive role, but to receive some structuring and guidance from their supervisors [17], for instance, knowing databases, bibliographic resources and specific sources for research, as well as appropriate methods and its application to each research.

Finally, contextual expertise is also important given that previous studies showed that this is also linked to better achievement. The analysis illustrates the significant impact of doctoral supervision on the learning and knowledge of doctoral supervisors, particularly to how supervisors engage with/in the social and political context of their university, understand themselves and their students, and how the contemporary context of supervision affects the sort of pedagogical relationships supervisors establish with their doctoral students [18].

Additionally, the importance of personal support was confirmed by several studies, indicating that it is important for supervisors to be personally involved in the PhD/master's projects of their students. In fact, it has been proposed that this can be established by, for instance, asking students how they are doing in their research, responding to student emails quickly, and showing a personal interest in the topic and/or thesis [17]. Even though some supervisors might view thesis supervision as a strictly professional relationship, it is still important for students to feel support from their supervisors.

As such, the main objective of this study was to analyse these five facets (learning alliance; habits of mind; scholarly expertise; technê; and contextual expertise) in Portugal. A questionnaire was applied to doctoral students that already started their thesis research as well as doctoral graduates in order to understand their perceptions, expectations, and needs as PhD students regarding the guidance received along their doctoral degree.

## **2 METHODOLOGY**

To understand the perceptions, aspirations and needs of doctoral students, in terms of supervision, the search for evidence is essential. Thus, a questionnaire inspired and framed by the research carried out by Halse and Malfroy [11] was made. This enabled studying this process and to draw conclusions about the ideas of Portuguese doctoral students. In this quantitative study, the survey was distributed to a convenience sample, obtained through the authors' networking contacts and disseminated through academic services that support doctoral programs. Moreover, this study intended to understand, on the one hand, the extent to which doctoral students consider such facets of the doctoral guidance process essential, and to what extent, in their experience, those have proven important in the pursuit of their doctoral course.

The questionnaire is mixed and self-administered, divided into five parts corresponding to the five facets - learning alliance; habits of mind; scholarly expertise; technê; and contextual expertise -, which are subdivided into closed questions. The response format is dichotomous and multiple. Finally, in order to have the full perspective of the PhD student, each question included 4 possible answers: i) crucial supervisor skill met (ie, the skill is considered crucial by the PhD student for the success of his/her PhD thesis and has been experienced as well - blue bars); ii) crucial supervisor skill not met (ie, the skill is considered crucial by the PhD student for the success of his/her PhD thesis, but the supervisor did not revealed this skill - red bars); iii) non-crucial supervisor skill (ie, although not crucial for the PhD student, the supervisor revealed this skill - yellow bars); iv) N/A (not relevant - green bars). An open non-mandatory question ended the questionnaire.

## **3 RESULTS**

### **3.1 Perceptions, expectations, and needs**

The questionnaire received a total of 149 answers, 39 from the health sciences field, 36 from natural sciences and 74 from social sciences & arts. Interestingly, it could be also observed that ~70% of the doctorates and current PhD students from the health and natural sciences graduated are younger than 35 years old. In contrast, within the social sciences & arts field ~ 60% of doctorates or PhD students are older than 41 years old.

Overall, the health science students' expectations were mostly met in all facets. Moreover, results show that 35,8% and 32,5% of respondents consider habits of mind and learning alliance, respectively, as the more important facets for a good PhD outcome. Regarding which facet could let them give up from the doctoral program, 69,5% pointed out habits of mind, reinforcing the importance of this facet in this kind of guidance.

Another topic that should be highlighted is the answers to the last open question where respondents could leave any comment they found relevant to this research. As it was not a mandatory question, the most mentioned themes induce an increased relevance in the perception of the respondents. Two main ideas stood out: i) there are supervisors who focus more on building their own curriculum vitae than on student research; ii) communication is essential in the doctoral guidance process. These results reinforce the specificities found in each of the facets presented below.

### 3.1.1 Learning alliance

Together with habits of mind, this facet is considered one of the most relevant or that has the highest impact in the success of PhD student studies. In Fig. 1A, it is shown that the health and the social sciences & arts students' expectations were mostly met within the learning alliance, unlike what was observed for the other 4 facets.



Figure 1. Results obtained for A) learning alliance and B) habits of mind facets.

### 3.1.2 Habits of mind

Together with the learning alliance this facet is considered one of the most relevant or that has the most impact in the success of PhD student studies.

The most critical point revealed within the health sciences field is the absence of a fair and constructive feedback of the supervisor. Regarding social sciences & arts field the critical point revealed is the lack of focus of the supervisor on the PhD results and progression as well as on students' academic career, as it is revealed on Fig. 1B.

### 3.1.3 Scholarly expertise

Results about scholarly expertise, presented in Fig. 2A, are the best from the health sciences field. Contrary to the social sciences & arts field, the PhD students from the health sciences field feel that their supervisors work in the field of their thesis. Natural sciences and social sciences & arts fields feel that the supervisor's knowledge is mostly theoretical and not translatable.

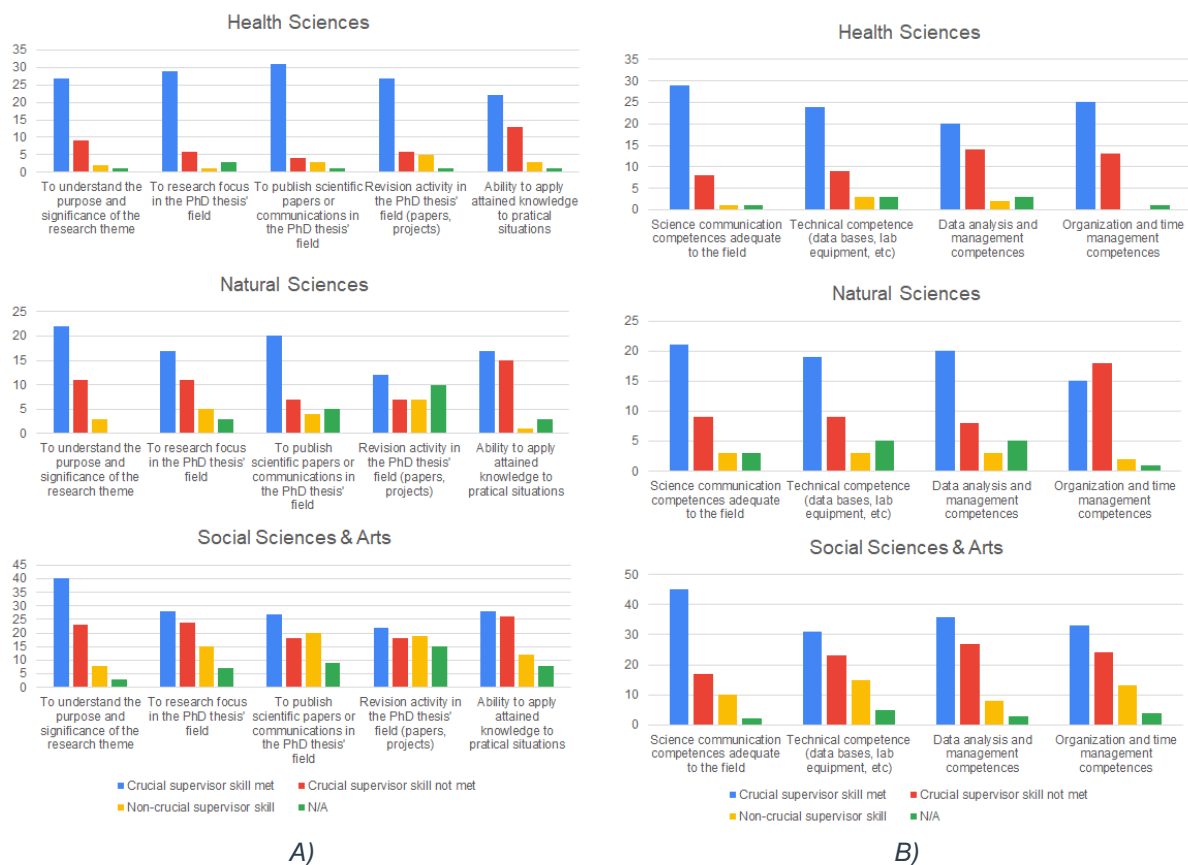


Figure 2. Results obtained for the A) scholarly expertise and B) technê facets.

### 3.1.4 Technê

Overall, this is a facet well accomplished within the health sciences, but still problematic in the social sciences & arts field, as it can be confirmed in Fig. 2B. The most critical point within this facet is the time management and supervisor dedication to the PhD thesis/student.

### 3.1.5 Contextual expertise

As shown in Fig. 3, this facet still needs to be developed in all fields, where the supervisor still has room for improvement.

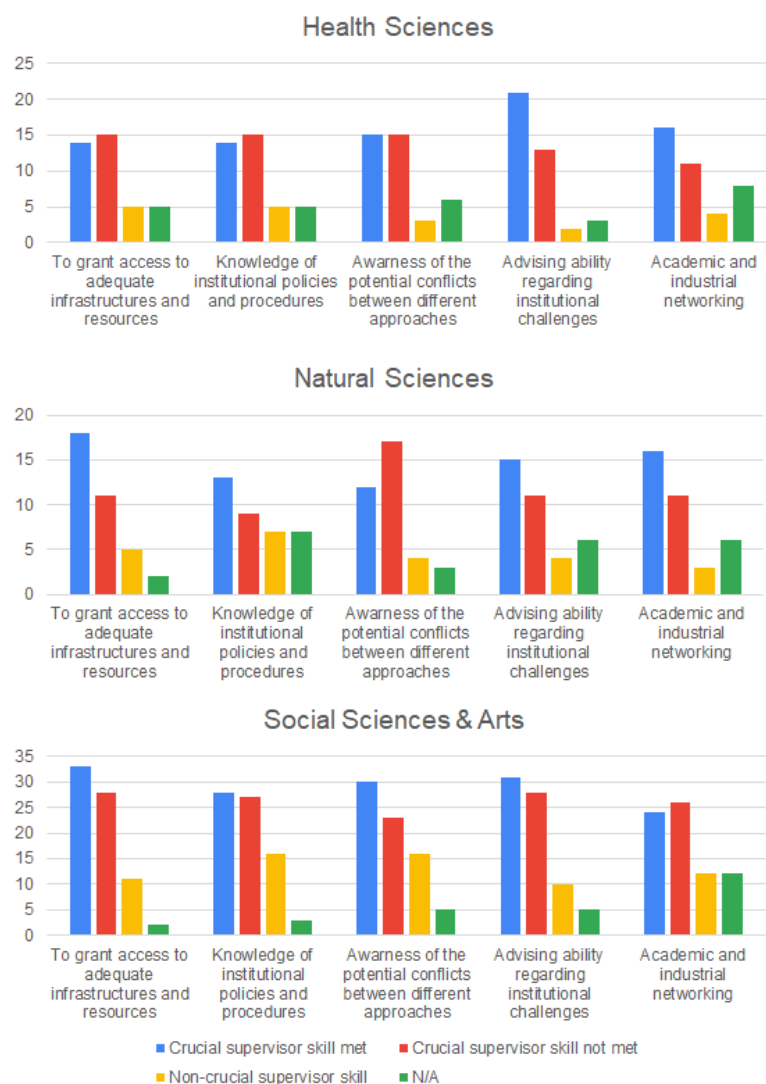


Figure 3. Contextual expertise facet.

## 4 CONCLUSIONS

In line with the studies on the importance of reflection around the supervision of doctoral students, this research reveals details that can help to understand the perceptions, needs and expectations of PhD students. The relevance of this study is also mirrored by the quick adherence to the questionnaire, as well as the direct reference to it in the answer to the non-mandatory open question. On the other hand, some respondents, especially the ones that were part of the authors' network, were surprised about the theme of this research, highlighting its importance.

In this sense, it seems that doctoral supervision is also a 'taboo topic' in the academic context, probably due to several dimensions that are interrelated. As data showed, there's a perception about the lack of interest on students' academic career, research and focus on results, especially in social sciences & arts. As referred by some respondents in the open question, this means that emphasis relays on building the *curriculum vitae* of supervisors rather than on the student's progress. However, it is important to discuss these results within the professional context of higher education professors nowadays. Since the evaluation of higher education institutions and professors is usually focused on research performance, but, at the same time, these professors have different tasks related to teaching, supervision, research and bureaucratic issues, the lack of time to accomplish with quality all dimensions can lead to strategies to use the most of the resources at their disposal, even though some questions may be raised ethically. Thus, if the pedagogical dimension of the different areas of activity of the professors was considered in their evaluation and, consequently, in career development, it is likely that there would be a greater concern with the development of skills needed to doctoral thesis supervision.

On the other hand, as formal pedagogical education is not mandatory in Portugal, for PhD supervisors nor for higher education professors, how are the skills needed identified and acquired?

This is not a new issue discussed at the academic world. Given the explicit link between supervisor quality and completion, a sample of eight Australian universities' programs for supervisors was analysed to see what pedagogical and theoretical issues the universities considered important to address with their supervisory staff as a means of improving quality [19]. In this sense, some recommendations to further detail research on this topic and measures to be taken by higher education institutions that want to improve their supervisors and doctoral programs are presented.

Other studies prove that there is a direct link between the quality of supervisors and the success rate of doctoral students, leading to the inevitable path of supervisors training [20]. In this sense, in order to develop skills in a certain area, formal or informal training is necessary. It is important to develop learning spaces that promote the development of the 5 facets presented, even with different formats: formal education with more or less extensive curricular plans (short or long term); workshops focused on specific topics; sharing communities; or supervision and mentoring processes to supervisors at the beginning of their careers.

In terms of contents, this research stood out some relevant perspectives. Given the results of the study, one of the themes on which priority should be given in these training courses is emotional intelligence, a process of self-knowledge, of putting oneself into question. This is the first step needed to someone that reached a certain level in his/her career that stop questioning the practice, that is, crystallization of practices. As so, discussion about self-regulation will allow supervisors to actually guide and contribute to doctoral students' progress, instead of focus on their one career. More than knowledge of the expertise area, they need guidance training.

On another level, it is also important work on the collective discourse on PhD guidance, which ends up building and reinforcing perceptions about what it is, how it should be done, and what skills will be needed. Based on the perceptions of doctoral students, it is clear that other dimensions of supervision must be brought up for discussion so that the social representations associated with the supervisor profession include the crucial dimensions for the completion of the PhD. Thus, reinforcing the skills related to the habitus of mind, the learning alliance and contextual expertise in the speech may have an impact on the way that supervisors work on their professional identity, from a quality perspective.

Lastly, this research is a starting point for other studies that deepened to assess the supervisors' perception of their own supervision, to understand whether the perceptions coincide with the students' expectations and needs, and how one can act to make both converge.

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